

TABLE 10a
SELECTED REMEDY
ESTIMATED COST

In-Situ Treatment with Engineered Cover and Institutional Controls

Capital Costs

Item Description	Quantity	Unit	Unit Cost	Item Cost
I. Institutional Controls	1	lump	\$50,000.00	\$ 50,000
II. Site Preparation				
Mobilization/Setup	1	lump	\$80,000.00	\$ 80,000
Erosion and Sediment Controls ¹	1	lump	\$50,000.00	\$ 50,000
Subtotal				\$ 130,000
III. Demolition				
Demolition and Crushing/Grading Debris	1	lump	\$380,000.00	\$ 380,000
Relocating and Grading of Creek Sediments/Soil	3,000	cy	\$4.00	\$ 12,000
Subtotal				\$ 392,000
IV. Engineer Cover System				
Sub-base layer (6" General Fill)	2,120	cy	\$15.00	\$ 31,800
Geosynthetic Clay Liner	131,000	sf	\$0.70	\$ 91,700
60 mil HDPE Liner	131,000	sf	\$0.80	\$ 104,800
Geonet Drainage Layer	131,000	sf	\$0.40	\$ 52,400
Protective Geotextile	131,000	sf	\$0.40	\$ 52,400
18" General Fill ²	7,260	cy	\$15.00	\$ 108,900
6" Topsoil ²	2,410	cy	\$25.00	\$ 60,250
Mulching/Seeding ²	131	1,000 sf	\$65.00	\$ 8,515
Subtotal				\$ 510,765
Direct Construction Total (DCT)				\$ 1,082,765
Indirect Construction (20% of DCT)				\$ 216,553
Construction Total				\$ 1,299,318
Pre-design Investigation (Total), including:				\$ 255,000
Supplemental Overburden Investigation				
Building Survey				
Creek Sediments/Soil Characterization				
Design (10% of Construction Total)				\$ 129,932
Permitting/Legal (5% of Construction Total)				\$ 64,966
Regulatory Submittals (10% of Construction Total)				129,932
Construction Phase Engineering Services	5	month	\$30,000.00	\$ 150,000
Projected Opinion of Probable Capital Cost				\$ 2,029,148

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In-Situ Treatment with Engineered Cover and Institutional Controls

Annual Costs - 30 Year

I. Operation and Maintenance Costs	Quantity	Unit	Unit Cost	Annual Costs
GW Treatment Plant O & M	1	yr	\$360,000.00	\$ 360,000
Site Inspection ³	4	inspections	\$2,500.00	\$ 10,000
Cover Maintenance (Mowing & Repair)	3	ac	\$5,000.00	\$ 15,000
Annual Progress Report	1	lump	\$20,000.00	\$ 20,000
Sub Total Annual O&M Cost				\$ 405,000
II In Situ Mass Reduction				
In Situ Treatability Testing (Pre-design)	1	lump	\$5,333.33	\$ 5,333
Phase-in and Full-Scale Field Implementation and Operation	1	lump	\$32,000.00	\$ 32,000
Miscellaeneous Appurtences	1	lump	\$1,666.67	\$ 1,667
System Dismantlement	1	lump	\$3,333.33	\$ 3,333
Annual O &M (sampling , reporting, maintenance)				\$ 25,000
Sub-Total: In-Situ Annual Cost (per year cost for 30 years)				\$ 67,333
Total Annual O&M Cost - Present Worth Value "R"				\$ 472,333
Present Worth @ I = 5%, n = 30 yr = $R \left[\frac{((1+i)^n - 1)}{i(1+i)^n} \right] = R[15.80]$				\$ 7,462,867

Total Present Worth

Total Capital Cost				\$ 2,029,148
Total Present Worth O&M Cost-30 year				\$ 7,462,867
Subtotal				\$ 9,492,014
Projected Opinion of Probable Cost (Present Worth)				\$ 9,492,014

¹Engineering estimate from previous work

²RS Means Building Constrction Cost Data

³Semi-annually and after storm events